



Kraken II Remote O perating Vehicle (ROV)



Alvin deep-diving manned submersible



Long Term Ecological Observatory



Aquarius, the world s only underwater laboratory

1315 East West Hwy Silver Spring, MD 20910 301-713-1671 www.oar.noaa.gov

# National Undersea Research Program

# Leader in underwater science and exploration

# WhatWhat does the National Undersea ResearchWhat does the Nation nation?

The National Undersea ReThe National Undersea Research The National Undersea Scientists with the providing undersea scientists with the providing underseaundersea environment. NURP works with scientists to use submersund remotely remotely operated or autonomouremotely operated or autonomous uremotely underwater underwater laboratories and observatories, and other cuttingunderwater laboratories and observatories, and other cuttingunderwater laboratories and observatories and other cuttingunderwater laboratories and observatories and other cuttingunderwater laboratories and include nearly all the scientific disciplines.

NURPNURP is headquartered in NOAA's Office of Oceanic and AtmosphericNURP is he (OAR)(OAR) in Silver Spri(OAR) in Silver Spring, (OAR) in Silver Spring, MD, with providesprovides grants through its regionprovides grants through its regionaprocommunity. Highest prioritycommunity. Highest priority is given tocommunity, lakes, territorial seas, and adjacent waters. The regional centerslakes, territorial seas twotwo hundred or more untwo hundred or more understwo hundred or more understant seas steward of oceanic resources and environments. Preas steward of oceanic centers include:

- " North Atlantic and Great Lakes: University of Connecticut-Avery Point
- " Mid-Atlantic Bight: Rutgers University
- " Southeast and Gulf of Mexico: University of North Carolina at Wilmington
- ' Caribbean: Caribbean Marine Research Center; Perry InsCaribbean: Science
- " West Coast and Polar Regions: University of Alaska Fairbanks
- " HawHawaiiHawaii and the Western Pacific: University of Hawaii at Manoa, Ha Undersea Research Laboratory

### **Recent Accomplishments:**

- ResearchResearch on the effects Research on the effects of trawResearch on to currentlycurrently closed to fishing provide an opportunitcurrently closed to ratesrates in a range of rates in a range of habitats provideprovide management provide management with provide management reopening the closure areas.
- "ResearchResearch onResearch on factors affecting coral health. Payoffs: Maintain ofof corals and preventing dof corals and preventing damage of corals a HealthyHealthy coral Healthy coral eHealthy coral ecosystems support activities activities that are worth over one billion dollars aactivities that are conducted over 100 research projects addressing a wide range conducted and relevant to corals relevant to corals including fisheries, reef conditions
- ResearchResearch on frozenResearch on frozen methane hydrates. Research on frozen than than 1,000 times more energy than all estimated oil and gas source combined. NURP has supported combined. NURP has supported null for Mexico Gulf of Mexico to studGulf of Mexico to study hydrates, ecosystems associated with them.
- PioneeringPioneering development of unmanned obPioneering development of research.research. Payoffs:Payoffs: NURP provides the ability to studyPayoffs phenomena in real time.

#### What's Next for NURP?

Science Challenges in the next five to 10 years:

- " AssumeAssume leadership of the U.S. Program in ocean exploration to better assess livingAssume leader resources, resources, physical and biogeochemical processes, and how to better esources, physical and biogeochemical for future generations.
- " Improve understanding of undersea ecosystems.
- " Support exploration and discovery of new resources, including biomedical substances.
- " InIn cooperation with NMFS, improve the science basis to mln cooperation with NMFS, improve the science protected species.
- " Develop principal technologies to support exploration and research in the undersea environment.

### **Research Partnerships:**

NURPNURP partners are the UniversityNURP partners are the University of CNURP partners are the University Carolina-Wilmington, Carolina-Wilmington, the Caribbean Marine Research Center, the Carolina-Wilmington, the Carolina-Wilmington, the Carolina-Wilmington, and the Jason Foundation.

## **Budget and Staff:**

NURPNURP manages a \$13.8 million program with 5 federaNURP manages a \$13.8 million program with





# For more information, contact:

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